InterspecieS

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To significantly lower printing costs, I've decided that the ideas are the thing, and probably no one cares a whit if I print the front page using only black ink.

— Your faithful editor

The Cachalot Map

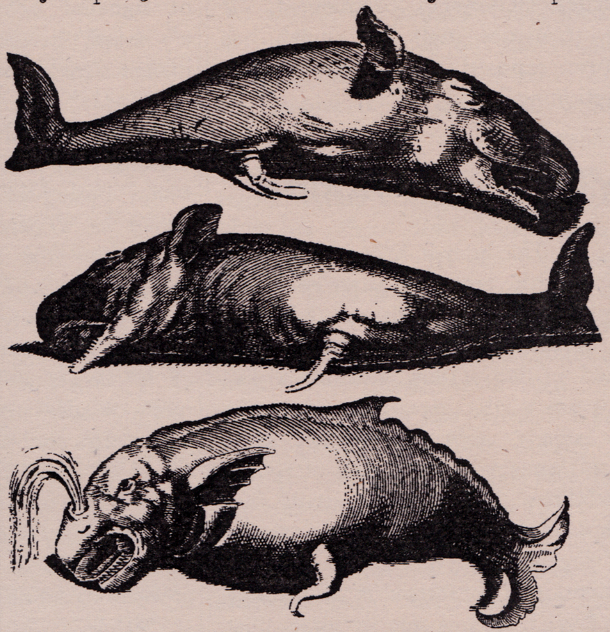
Every culture develops unique maps or filters for perceiving reality. No one likes to believe their own viewpoint is essentially flawed, although the myriad expressions of human experience makes it all seem quite ordinary and normal. Whether we refer to our maps by the grand names of religion, science, politics, economics, or art; or whether we can even acknowledge that our view of reality enter our brains through a filter comprised of culture, language, and faulty sensual apparatus, these maps serve the crucial purpose of helping us make sense of a bewildering world.

Using the correct map, a system that seems chaotic on the surface can demonstrate clear signs of a hidden order; essentially showing us signals peeking through the noise. For instance, most religions provide a unique map to help us deal with the great unknown of death. And art provides many maps to help guide the individual to perceive culture in new ways. Relying on tools of metaphor and symbol, art holds up a mirror to point our our own weaknesses and strengths. In science, the difficult map we call quantum mechanics attempts to delineate patterns of order within a subatomic world in which waves routinely act as particles and vice versa.

If we choose the wrong map to navigate a system, we can get lost confusing the map with the territory. The subatomic world, for a well known example, makes no sense when navigated by the map of classical physics. Sometimes, the wrong map can make a complex system inadvertently appear deceptively simple. Playing music, for instance, is usually regarded as an art form, grounded in an aesthetic map of our own invention, to help us perceive beauty through sound. Using this map, as Interspecies does, to bond with whales is an eminently sophisticated process, although ironically, many who try it believe that all it amounts to is tinkling sound into the water and then waiting for a whale to vocalize in the vicinity.

Rename The SPERM WHALE Contest

:::Help Reconnect Territory to Map:::



::Improve relations between species::

::by affirming poetic accuracy::

Using the wrong map to read a system usually leads to anomalies for which the map can not account.

take the form of unacceptable behavior, unaccountable results, or background noise that has its own unerring way of turning increasingly loud as we delve deeper. As these anomalies pile up, human nature intrudes. We want to trust the map because it's familiar. The data, our senses — the territory - must be incorrect. If we just try harder, even permit ourselves to go into denial, perhaps the anomalies will eventually kowtow to the accepted order. So we do our best to make the anomalies fit our view of what's acceptable. This pattern of adhering to a flawed map primarily because its familiar, may explain the Catholic Church's unwillingness to face it's unconscionable role in nurturing human overpopulation.

Commenting on scientists in every field who remain unwilling to drop ineffectual maps of nature, physicist Werner Heisenberg commented, "it is not nature itself [we study], but nature exposed to our method of questioning."

Who's an Animal?

The human folly of confusing maps with territory inserted itself firmly in my mind this past July as I sat in a rubber boat off the Azorean island of Sao Miguel, watching a pod of sperm whales engaged in a behavior that simply made no sense in terms of mainstream biology's map of animal capabilities. I felt quite certain that I was watching the whales partake in a ceremony, specifically a group meditation. They seemed to be chanting together. I became acutely aware that mainstream biology simply has no map that allows an animal to chant. Animals vocalize, call, cluck, howl. But chant?

Most mainstream whale research is conducted by biologists. Far less is manifested by cognitive scientists, who prefer to hold their dolphins captive to test intelligence; handing out food rewards for tasks well done. But outside the mainstream, there is a vigorous undergound of whale lovers, activists, musicians, entrepreneurs, channelers, psychics, dolphin swimmers, and a huge lay community that believes cetaceans possess capabilities far beyond what we read about them in the mainstream literature.

For twenty five years, Interspecies has walked a fine line to engage both camps. For an example of my own non-judgmental tightrope walk, last month I spent an eventful evening with a noted channeler asking an "entity" to explain beluga language. And next month I make a key presentation at the annual conference of the American Cetacean Society.

The biologist's standard map works admirably well to explain animal body parts and functions, migratory movements, population dynamics, basic social structures, and the documenting of signaled behavior, even though it's mostly demonstrated in terms of human signaled behavior. But just as a frog only sees objects that move across its visual field with certain motions, so the map preferred by whale biologists seems increasingly flawed as a perceptual tool to help us navigate the *consciousness* of these beings who sometimes seem to be *mostly* consciousness.

This summer, as a group of us began a long term study of sperm whales under the auspices of Interspecies Inc., we have begun asking ourselves some basic questions that, increasingly, sets us at odds with the contemporary biological map. Our quest includes a better understanding of whale consciousness, the potential for an "echoed" vocabulary, sperm whale aesthetics, telepathy, protocol, ethics, and that fabled cetacean wisdom.

Is it even possible to translate such phenomena into terms that biologists - and consequently the National Geographic reading public - will acknowledge as essential aspects of any 21st century study of toothed whales? Or perhaps we do better to start at the beginning. Are whales people, or are they animals?

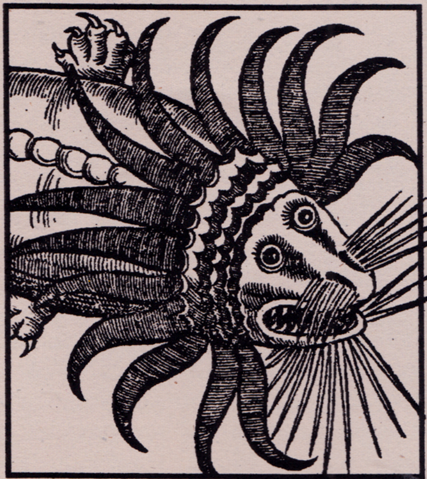
It is clear that these questions don't yet exist within biology's standard operating map. And more's the pity that biologists overwhelmingly remain our culture's primary arbiters of whale behavior.

Holistic Research

Interspecies Inc is refining a uniquely holistic context for this next phase in our longterm communication research with whales. We include at least one whale biologist in this project. There is an obvious need to photo-ID individual whales, just to learn how many still reside in our study area after a century of whaling that decimated a once thriving population. Once a biologist can establish numbers and individuals, the Azorean government plans to set limits on the whalewatching licenses it issues. We are encouraging them to start a whale adoption program.

Dealing with whale calls as a potential basis for whale language prompts us to engage acousticians, programmers, and cognitive scientists.

Beyond this, Interspecies is writing a new map to help us navigate uncharted territory. We will attempt to establish a protocol for direct contact with these whales. We will follow this protocol to explore the intersection of whale songs and music. Likewise, we



Bearded Whale, map woodcut, 1553

rely on this music as the basis for an interspecies relationship. We engage fields of expertise that are new to whale research including anthropology, political activism, music, the visual arts, mythology, publicity and, always risky, mysticism.

This holistic approach is grounded in our own considerable experience interacting with many different whale species over the past twenty five years. We feel quite certain in our claim that understanding whales demands this new map. How else can we possibly hope to locate these powerful, mindful, energetic, friendly, mysterious, evocative, and endangered beings amidst our culture's loud noise of what it means to be perceived as an animal.

The interspecies map questions the presumed hierarchy of evolution which places humans at the top of a pyramid, and which obliquely justifies the aggrandized prerogatives our species presumes for itself. The interspecies map emphatically questions two cultural dispositions that derive from these prerogatives. First is a presumption about the relative value of human lives versus animal lives. And second, is the egregiously untested preconception that every non-human species has a set limit to consciousness which, in every case, exists below our own.

Even as our map embraces the rigor of traditional biology, it differs most markedly from the old map by welcoming intuition into the center of the arena of our study. Intuition bolstered by experience, informs us again and again that whales are wisdom keepers, old entities, beings who possess sobering acumen and insights about living on this planet. We plan to include such vocabulary in our study, only because it fits the subject.

Clearly, the old map provides no vocabulary or directions on how to meet such beings. Perhaps emboldened by the blessing of many generous sponsors providing us with continuing access to these creatures, we at Interspecies work hard to re-define the very concept of "research tools" to include communion, interaction, humility, and respectfulness.

Star-faced whale, map woodcut, 1550

Time is short. We are no longer content to let biologists fit the anomalies of whale behavior onto a flawed map based on a perception of animals to which our profoundly anti-environmental society swears allegiance. Whereas a few diehards accuse us of anthropomorphism, we feel quite the opposite, that our visionary path is the real one. It's the necessary path if our own species is ever to perceive whales as they actually are. The good news is that allegiances are slowly shifting. Two mainstream whale conferences in the past year have focused attention on the controversial subject of whale culture.

And we are tickled pink to realize that, with each passing year, our own long term objectives gain stature within mainstream whale science.

It remains a difficult road we wander. As the philosopher Wittgenstein wrote, if a lion could talk we could not understand him because we do not live in his world. Hopefully, our holistic map is drawn in such a way to help us more adroitly navigate the whale's world, rather than just our own.

Big Brains

Studies of dinosaurs conclusively show that large bodies do not automatically need large brains to control extended muscular functioning. The sperm whale, a large whale but certainly not the largest, possesses the largest brain in the history of the earth. It can weigh as much as seventeen pounds, compared to the average homo sapiens 3.5 pound brain. One might easily wonder if this being's *mind* is likewise outsized. If so, then what does the sperm whale think about? And what does it think about our own lesser-endowed species?

Imagine, human beings may never properly elucidate this species' behavior because, as Gödel's theorem posits, our own smaller computer can not map the cetacean's larger computer. Perhaps ironically, that may explain why so many people feel something indefinable and yet exceedingly powerful in this whale's presence.

The experience of the sublime leaves us clinging to the rather ethereal idea that this cetacean species may be the purveyor of a genuine mystery, rather than just being un-researched because of some lack in contemporary scientific ingenuity. On a rather crass level, the perception of the sublime may help us understand why whalewatching has become a $100 million business world wide.

And consider this. Until twenty years ago, human beings related to this species only by slaughtering them at every turn. Even this year, the Japanese whaling Industry is out on the Pacific ocean harpooning 15 more sperm whales although the industry acknowledges that they no longer need the oil, and the meat is laced with toxic levels of mercury. If you appreciate beauty or intellect, join the fray to protest this senseless "scientific whaling".

The Cachalot

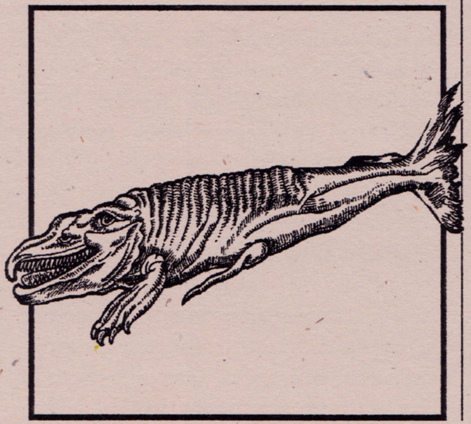
Interspecies has just initiated what appears to be the first attempt, ever, to attempt a direct, systematic contact with the sperm whale. In July

2002 we started this long term project in the Azores founded on the premise of patiently initiating a relationship with one specific pod of sperm whales which resides in an area otherwise free of human boat traffic.

Adopting a holistic regimen, we are already designing next summer's focus to include an interspecies communication consultant, a bio-acoustician, a photo ID specialist, a whale activist, an Azorean eco-tour entrepreneur and a psychic to help us fill in some of the mental blanks. At the very least, we hope to better pinpoint the blanks themselves.

Including a publicist on our team is something special. Interspecies is now sponsoring an international campaign to change this whale's name. "Sperm" whale refers to the large oil-filled organ found in their forehead which old time whalers believed was seminal fluid. Why females would also have this organ was never explained. The animal is called *pottval* in German referring to the cooking of blubber in huge pots to render the oil. The Japanese call it *makko kujira,* "incense whale" referring to ambergris, the fragrant substance composed of digested squid beaks which were once extracted from the intestine. In every case this whale is named after commercial products extracted from its body.

Spanish, Portuguese, and French do much better, calling this whale *cachalot,* from the word for "tooth" in the ancient Gascon language. This seems fairly accurate, a respectful name. Indeed, this whale is the proverbial "toothed whale". After centuries of usage, the Gascon derivation has receded leaving us with a name that is, finally, (at long last) just a name. Thus we choose cachalot as our preferred English name, and are sponsoring a campaign to make it so.



Four-eyed whale, map woodcut, 16th century

Signatures and Daisies

Last July we observed a pod of females and their young engaged in a resting activity. The whales seemed unconcerned by our presence eight miles from shore in waters 6000 feet deep. They faced one another floating on the surface, appearing as petals of a huge gray daisy, Touching foreheads, they individually vocalized a continuous and rhythmical series of loud clicks. Imagine a typewriter establishing a complex, repeated poly-rhythm and you get the general idea of what we heard.

In correspondence with Spanish bio-acoustician Marcel Andre, who has been studying cachalot clicks in the Canary Islands for several years, we know that certain individual click trains are a whale's "signature", basically it's name. When an entire pod comes together to vocalize individual signatures, we hypothesize that the result is a pod-identifying poly-rhythm, a family signature. The sophistication of the group rhythm likewise lifts this family signature into the realm of music.

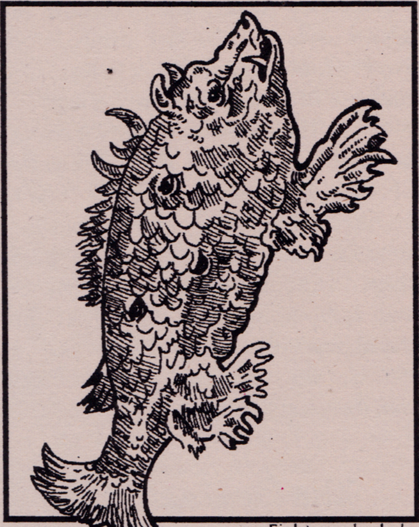
The cachalot possesses a unique vibrating organ, the so-called "case", inside their forehead that is the size of a car, and which is used to transmit, receive, and focus sound waves. When the whales click together, each whale's body physically vibrates. Is the formation we witnessed just a statement of group identity? Or were the whales tuning themselves together in preparation for some other, unknown activity? Those on our team who seek functionality, have suggested that by clicking together, the whales may be calling in a male pod which is swimming thousands of miles away. Others surmise that the created vibration seems analogous to the clock cycles that synchronize the speed and power of the various components of a computer processor. Still others in our group believe that the formation we witnessed bears a striking resemblance to human ceremonies of group meditation based on chanting. Use your own imagination to dream up other possible uses, whether communicative, functional, ceremonial, aesthetic, sacred or otherwise, to explain this event.

We propose a great adventure. Let's gather together a diverse group of thoughtful humans to meet the cachalot in the open ocean, and attempt to discover a common ground of communication. What method might we employ to even begin this difficult process?

We agree with philosopher Gregory Bateson, who spent years working to communicate with dolphins. Bateson concluded that attempting to translate cetacean whistles into sign language — or even into a made-up halfway language like John Lilly's computer-based delphinese — is a futile endeavor, not unlike trying to translate Beethoven into words and sentences.

For that very reason, we at Interspecies recommend music as an important component. Improvised music displays something essential about the human heart and pulse, and is an evolved expression of human imagination and culture. But can music declare that our own species is finally ready to transcend the cruelty we exacted so thoroughly on the sperm whale over several centuries?

All toothed whales use clicks as the very basis of perception. It's sonar, echolocation, the primary means by which they perceive their often-murky underwater world, just as humans rely primarily on eyes to perceive our world. A staccato burst of clicks bounces off an object such



Eight-eyed whale, map woodcut, 1550

as a squid and echoes back to the whale where it is received through nerve receptors in the jaw. The animal "hears" this echo as an actual three-dimensional image possessed of a certain shape, material density and distance.

Unlike the other toothed whales – dolphins, belugas, orcas – the cachalot does not whistle as a means of signaling simple messages like identity, distance, and alarm between members of their immediate pod. Socially, the species vocalizes a close approximation of their echolocation clicks, but this time back and forth to one another. It suggests a vocabulary of "echoed objects", a kind of three-dimensional holosonic language one might imagine being spoken by some otherworldly species from Star Trek.

Nonetheless, whale echolocation follows the same physical laws of acoustics that produces sonar in submarines and ultrasound imaging in pre-natal care.

We may already possess the basic technology to image cachalot clicks onto a screen. Our project is now putting considerable resources of time and money to develop digital tools and sonic techniques to test this hypothesis of an echoed vocabulary. For basics, we are assembling a specialized computer audio system to record the whales' calls *full spectrum*, from about 5 Hz to 200 kHz. We are also starting to work with a digital audio programmer to devise innovative sound mapping techniques. With good fortune, perhaps eventually we may be able to record whale clicks then graph them to display images of the echoed objects. Interpreting the images may bump up against Gödel's Theorem. If, for instance, the Hawaiian language has over one hundred words for rain, how many words might the deep-diving sperm whale have to describe water pressure?

Assuring close proximity to the whales for extended periods of time will be of immense importance in making the best recordings possible. To facilitate this process, Interspecies has procured a research permit from the Portuguese government, and has local sponsorship from the Futurismo company in Ponta Delgado. Futurismo is providing Interspecies with a suitable off-shore boat and local skipper.

Readers with an internet connection can view photos of the behavior we witnessed on our website at interspecies.com. As they demonstrate, close proximity to the whales is not an issue. One evening, we sat silently among the whales for over two hours. We finally left them, still floating head-to-head, only because we were in an open boat and the sun was about to set.

Resident Whales

Last summer's group included Jim and Katy Nollman, Rauno and Vilma Lauhakangas, Courtney Stark Vail, and Joan Ocean. All the photos on our website were taken by Katy Nollman, using a digital camera provided by one of Interspecies' corporate sponsors, Casio Japan.

We chose the Azores because this island chain located in the middle of the Atlantic Ocean is one of the few points of land on the planet where the cachalot remains relatively close to shore for much of the year. In the area we are doing our study, there are about 30 whales in residence. One important component of our project will be identifying these 30 individuals, both by the physical scar patterns on their bodies as well as by their unique click rhythms. This process has now begun.

As a direct result of whaling, the cachalot is, today, on the endangered species list. Azorean whaling records show that as many as 5000 whales were killed in this small offshore area by men in open boats over the course of the 20th century. The last processing plant was closed in 1985, and although it still stands, the building is in bad disrepair.

Promoting whale protection has always been a key component of Interspecies Communication projects. Rauno has much experience protecting beluga whales on the Russian White Sea, by developing a local economy to better appreciate and thus ultimately, better protect whales. This past summer, he began consulting with local Azorean entrepreneurs and government officials to promote this old whale works as the optimal site for a new Whale Museum and Ocean Education Center. It will display the history of Azorean open boat whaling, as well as the vulnerable resource of the living whales who still reside offshore. We are planning an internet-based component as well, so people around the world can hear the whale's clicking as we record them.

No Delicacy

[From a press release to Interspecies.com]

The latest scientific research has cast a disturbing light on the Japanese Whaling Association's push to encourage young people to eat more whale meat, according to the Australian Secretary for the Antarctic, Dr Sharman Stone. "It is very surprising that the Japanese are encouraging the eating of whale meat with shoppers queuing for free samples of canned whale stew, deep-fried whale meat and blubber recipes in downtown Tokyo", Dr Stone said. "Unfortunately, what these unsuspecting consumers probably received was a cocktail of toxins and contaminants that have made their way into our oceans during the last 50 years. We now know that these chemicals have made their way up the food chain and into the bodies of whales. The highest concentration of EDC's (Endocrine Disrupting Compounds) ever found in *any* animal came recently from a minke whale, the very species presented for free tasting to Tokyo lunchtime shoppers.

EDC's are highly toxic, chemically stable, and more soluble in fats than water. Every time an animal consumes a plant or another animal containing them, it accumulates the chemicals. The longer the animal lives, the more is accumulated. Mammals, including humans and whales, pass the substances on to their infants through mother's milk.

While the United States allows the sale of fish, only if it contains less than 2 parts per million of PCB's (Polychlorinated Biphenyl), killer whales sampled mid-ocean have been found to have concentrations as high as 400 parts per million. The Beluga Whales of the Gulf of St Lawerence, have concentration of PCB's as high as 3200 parts per million.

Tragically, because air and water current disperse the EDC's toward the poles, polar people and animals have the highest accumulations. Whales caught in the Antarctic are not free of the threat of contamination

"Whales have great difficulty disposing these toxins from their bodies." Dr Stone said. "So where do the contaminants end up? In the whale meat being served at this very moment to Japanese consumers. This is a serious human health issue. It is important that the Japanese Whaling Association informs whale meat consumers about the toxicity levels found in some meat and blubber of the product that they are trying to encourage their consumers to eat".

Reviews

Interspecies warmly promotes a growing community of artists and inventers who work with whales and underwater environments. Here are some recent CDs by two of the best. You may have to order them from the specialty addresses included, but also try Amazon.com.

Liquid Sound,

Volume 1, Mickey Remann, producer. To order, Email: liquidsound@freeform.de

Mickey Remann is a German entrepreneur and conceptual artist who has been a member of the Interspecies extended family and board of advisors for over 20 years. Over that period, he has developed much innovative technology as well as several performance events for audiences to experience underwater. His performances includes underwater concerts and, more recently, fantastic multimedia installations that encourage relaxation and healing, which are available through a company called Liquid Sound. These installations are now operating at several health spas across Europe. The concept for this underwater art and healing experience evolved in the 1980's, after Mickey spent a summer joining one of Interspecies' whale projects as artist in residence.

His CD includes music composed and recorded specifically for people to listen to underwater. At least one cut was recorded on one of Interspecies' field projects with orcas.

Grooved Whale,

Lisa Walker, Earthear Music. www.earthear.com

Another friend of Interspecies, Lisa Walker is a classically trained violinist living in Vancouver. She recently spent a summer recording and interacting with humpback whales in Hawaii and Alaska, also recording the whales own sounds. Her compositions grow from complex melodies and rhythms of these humpback songs.

The distributor, Jim Cummings of Earthear Music, is another member of the Interspecies extended family. Earthear promotes and sometimes subsidizes all sorts of recorded music that includes sounds from nature and indigenous people. Earthear also distributes Interspecies' own CD, as well as Jim Nollman's books. Check out their catalog online.

The Beluga Cafe

Jim Nollman, Sierra Club Books, 2002

This editor's new book has just been released. It describes the only whale project Interspecies' ever produced in which the participants never saw a single whale.

I consider this book my best writing yet, loaded with humorous conversation and quirky insights about everything under the midnight sun.

ALERT: Help this author make a living by insisting that your local bookseller stock this book voluminously. Review it yourself in a local newspaper. And give it to everyone on your Christmas list. Hopefully, you can find it anywhere and everywhere.

Here's a short excerpt to whet your appetite.

...We take it easy, drinking tea to ward off a creeping sense of dehydration, sitting with our backs to the sea to avoid facing a twenty mile per hour wind in forty-five degree weather. The immediate vicinity is a vast treeless meadow comprised of low willow hedges framing cottongrass and wooly lousewort waving in the stiff breeze for a mile or more in three directions. In some places the six-inch tall cottongrass's Q-tip flower heads grow so thick the plain appears covered in a ground fog. The late night sunshine of mid-July beats down on the cool windy land and sea causing the

[illegible]

refractive lens of skewed air currents to magnify objects transforming the low islands on the horizon to the shape of giant mushrooms with impossibly-flared cliffs and metal-shiny flat tops. Jonathan describes one of the more pronounced refractions as a mesa. Daniel disagrees, preferring a military explanation. “It's an aircraft carrier, no, wait, it's the blast from a rumored hydrogen bomb the size of a suitcase.”

Only a fool would dare to wager what those shape-shifting dots and spires popping up along the edge of the sea might actually be. I squint my eyes, make a best guess that I'm peering at a logjam of uprooted spruce trees carried down river from the boreal forest of north-central Canada. But my imagination intrudes, drawing sharp edges on objects that refuse to display any edges at all. In such a fashion, three blobs far to the northeast metamorphose into a military radar station. Half a day passes. I grow frustrated that the clumps never come into clear focus. I solicit Jonathan's opinion, to learn he's also been squinting at that same shrouded vista. “It's the Nina, Pinta, and Santa Maria under sail.”

By midnight, with an apricot sun sitting low in the northwest quadrant of the sky, the wind has ceased and we have turned about to face the sea, our backs lodged comfortably against a white-on-white curved log Jonathan hauled to camp from up the slough, munching on slices of deep-dish anchovy pizza. Daniel turns to Jonathan, “Those aren't sailing ships, they're mammoths caught in quicksand. It's too bad they're such huge animals, because we're never going to be able to pull them to safety.”

Next morning, with a cheerful yellow sun squatting in the eastern sky, we gather again to eat scrambled eggs through our mosquito hoods. Even more awash in the hocus-pocus landscape, today's bewilderment has started to be reflected in personal hygiene and fashion. Just as our eyes saw a radar station, then Columbus, and finally mammoths, now we gaze upon each other and recognize three eco-tourists devolved first to conquistadors and finally to Neanderthals. One side of Daniel's face remains darkened from yesterday's soot. He's not aware of it. And neither Jon nor I care enough to tell him.

Dirt has acquired charisma. We've all stopped shaving, combing hair. The whites of our eyes sparkle. The dirt acquires heuristic significance as the day progresses. Yesterday we spread a tarp on the ground as a nod to some old obligation to keep our trousers clean. Now I sprawl horizontally on the peat, sifting cool silt through my fingers, stopping to examine individual sand pebbles, seeds, and tiny tufts of grass. I outstretch my palms flat to the grass, press firmly to test the resiliency of the soil, a gimpy man endeavoring to re-invent the pushup.

Jonathan returns from a walk but speaks no greeting. Daniel arrives silently from the other direction, sticks a square of used toilet paper against the fire pit's glowing coals, drops down to the same blackened cheek, blows until it catches, yanks his body violently backward to avoid scorching the Gilbert and Sullivan mustache. He finds a food bucket, pulls out the tub of miso, spoons a dollop into some water in a small pot, mixes it up, places it over the fire until the convection currents get it upwelling without actually boiling. “Never boil miso. You ruin it,” He declares to no one through a silly grin. Slurps soup while Jonathan slurps tea.

As clothing rumples, we grow contentedly taciturn until discussion implodes into a lumpy dialogue of silence and shrugs spiced with a few well chosen words. Grunts leap from our lips with weighted conviction, not as disconnected vowels and consonants that fail to coalesce into a higher order of nouns and verbs, but as the fertile seeds of a fully-elaborated discourse that, though mostly unspoken, communicates our cumulative philosophy about living in wilderness. “Ummmm. “ I answer. “Can't tell. S'pose it's Sumpthin'”.

“Yup, sumpthin'.” repeats Jonathan.

Then a full blown dissertation jerks my mind back to who I used to be. “Did you know mosquitoes have adapted to DDT?” announces Daniel. Before I ponder his meaning, I firstly note that he is not yet ready to abandon the use of language as entertainment.

“It's true.” he continues, when no one responds. “One species has developed a cuticle that toxins can't penetrate. Another has accumulated extra body fat, which increases its ability to assimilate fat-soluble compounds. And another species generates an enzyme that breaks toxins down into harmless compounds.”

Perhaps rudely, Jonathan responds in a sing-song voice to Daniel's lecture by repeating the phrase “fat soluble compounds” once, then a second time drawing out the syllables to achieve some annoying effect only he comprehends. Fa-at so lll u bull co-om p ou ou ounds. He taps a hand on his knee to enunciate a reggae rhythm accenting the two beat while the refrain slowly morphs into a syncopated chant: FAT one two, three, soluble COM pounds. Over and over he repeats. I feel ready to walk away from camp when Daniel suddenly joins in. I listen. And listen. But the chant doesn't end when I expect it to, although whatever element of spontaneous frolic it might have had departed our circle minutes ago.

I can't fight it, join in. Fat-fat-fat-fat soluble COM pounds. A guardian angel watching over us a hundred feet directly above the Beluga Cafe might observe us blathering on and on and conclude that indeed we are bewitched, three Mickey Mice quite a bit ahead of ourselves in the sorcery department, and therefore incapable of stopping an invasion of marching, chanting, blathering, broomsticks.

The camp has turned spooky.
and down waving a spoon